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PROGRESS REPORT #5, March 1, 1973

ERTS-1 PROPOSAL NMC NO. 205

CONTRACT NO. NAS5-21724

TITLE: "Detection and Monitoring Vegetation Damage Associated with Highway Facilities" - GSFC ID ST350".

BY: Ernest G. Stoeckeler, Principal Investigator

## PROBLEMS:

1. Color composites ordered about four months ago have not been received to date.
2. A color composite, using MSS Bands 4, 5 and 7, was made of ERTS-1 ID 14543 by the General Electric Company Photo Lab at Greenbelt, Maryland. The resolution and color balance of the simulated CIR transparency was not satisfactory. In 70 mm and RC10 CIR photography taken on a U-2 underflight on the same day as the above ERTS scene, areas of vegetation stress less than two acres in extent were readily discernible. The blue-green image of the salt-damaged coniferous trees have a high contrast with respect to the magenta hue produced by the surrounding healthy forests. The color tone of the vegetation stress test sites recorded in the imagery composite was practically white, making it impossible to differentiate the vegetation stress areas from other sites have the same signature. This single, commercially produced composite proved to be a disappointment.

## ACCOMPLISHMENT:

1. A U-2 Underflight covering about 600 linear miles was made on a cloud-free day on the last day of January 1973. The photography has not been received at this writing.
2. Arrangements have been made with Ames Research Center to obtain an Underflight in the latter part of March covering the Coastal Zone of

(E73-10331) DETECTION AND MONITORING  
VEGETATION DAMAGE ASSOCIATED WITH HIGHWAY  
FACILITIES Progress Report (Maine Dept.  
of Transportation, Augusta.) 2 p HC  
\$3.00

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Maine.

3. A proposal for participating in the ERTS-B program was submitted. The proposal involves a conortium of four State of Maine Agencies and the General Electric Company GEMS facility. In the process of preparing the proposal, personnel from the other agencies volunteered to assist in the ERTS-1 study, thus expanding the scope of this project. All disciplines relating to rural natural and cultural features will be studied.

PLANNED FOR NEXT PERIOD:

1. To attend the ERTS-1 Symposium at GSFC in early March.
2. To obtain color composites of three frames from a private photo laboratory. This type of data product is an absolute necessity for the accomplishment of the objectives outlined in this proposal.
3. Arrangements have been made to obtain ground truth and to field check interpretations made on underflight photograph and some imagery.
4. Electronic analyses of several scenes will be made, using commercial facilities, providing satisfactory color composite products can be obtained.